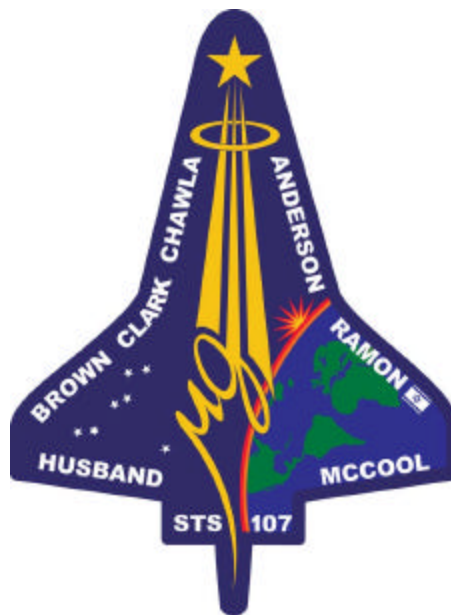


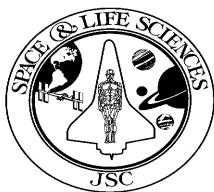
**Space and Life Sciences Directorate  
Flight Readiness Review  
STS-107**

**S. L. Pool**

**Date: January 9, 2003**

**STS-107  
Flight Readiness Review  
Space and Life Sciences Directorate**





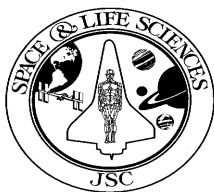
**Space and Life Sciences Directorate  
Flight Readiness Review  
STS-107**

**S. L. Pool**

**Date: January 9, 2003**

## **Space and Life Sciences Agenda**

- **Crew Health**
- **Open Items and In-flight Anomalies (IFAs)**
- **Radiation and Dosimetry Support**
  - **STS-107 Radiation Prediction**
- **Readiness Statement**



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**Date: January 9, 2003**

## **Crew Health**

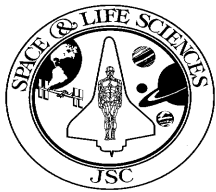
- **All Crew Physicals will be completed prior to flight**
  - **Applicable flight rules are in place**

**STS-107 Crew Surgeon**

**Smith Johnston, M.D.**

**STS-107 Deputy Crew Surgeon**

**Steve Hart, M.D.**



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## **STS-107 Open Items and In-flight Anomalies (IFAs)**

- **All remaining open work is planned and scheduled**
  - **Open items for STS-107**
    - **Crew Physicals**
    - **L-3 day Space Weather Analysis**
- **Exercise Countermeasures are in place**
- **Shuttle Water Quality: L-15 day sample was collected on 1/3/03. The L-15 sample met all specifications for water quality.**
- **No open SSP, IFAs or constraints**

## **STS-107 Radiation and Dosimetry Support**

- **Space Radiation: STS-107 Flight Specific Prediction:**
  - **Within Acceptable Limits**



## Certification of Flight Readiness Statement

The activities required to support Flight STS-107 have been accomplished except open work identified (Attachment 1). Space and Life Sciences Directorate (SLSD) is ready to support Flight STS-107.

There are no constraints to proceeding with the planned Flight STS-107 pending completion of scheduled open work.

SD/C. L. Fischer, M.D., Chief  
Space Medicine and Health  
Care System Office

SF/W. A. Langdoc, Chief  
Habitability and Environmental  
Factors Office

SJ/M. Anderson, Chief  
Biological Systems Office

SK/W. Paloski, Ph.D., Chief  
Human Adaptation and  
Countermeasures Office

SX/G. J. Byrne, Ph.D., Assistant Mgr,  
Office of Human Exploration Science

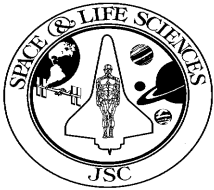
SL/J. Robinson, Ph.D., Chief,  
Program Integration Office

SM/C. B. Lau, Chief, Mission and Project  
Management Office

SA/C. M. Stegemoeller  
Associate Director, Technical

Concurrence by:

SA/J. R. Davis, M.D.  
Director, Space and Life Sciences  
Directorate

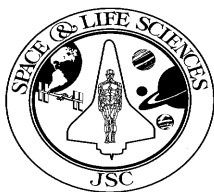


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**S. L. Pool**

**Date: January 9, 2003**

# **Backup Charts**



**Space and Life Sciences Directorate  
Flight Readiness Review  
STS-107**

**S. L. Pool**

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## **Radiation Analysis and Dosimetry Support Backup Charts**

### **STS-107 Flight Specific Predictions – Within Acceptable Limits**

- **Nominal mission (15 d 22 hr 11 m) IV crew exposure projection**
  - **Mission Exposure**                      111 mrad                      (307 mrem)
  - **Daily Average Exposure:**              7 mrad/day                      (19 mrem/day)

### **STS-107 Flight Specific Information**

- **Onboard Radioactivity (experiment name (# sources) – isotope – activity)**
  - **Orbiter fire detectors (all flights) -- orbiter (18) -- Am-241 ==> 6.12 µCi**
  - **Spacehab fire detectors -- Spacehab (4) -- Am-241 ==> 2.00 µCi**
  - **Operational TEPC (1) -- Cm-244 ==> 1.0 µCi**
  - **Biopack/FO-2 BONES (32) -- CA-45 ==> 0.13 µCi**

### **SPACE WEATHER FORECAST**

- **Risk of additional exposure from solar particle events and trapped outer electron belt enhancements. Space Radiation Analysis Group will provide an updated forecast at L-7 days**